

Notice of Allowability

Application No.

09/963,344

Examiner

Tom Y. Lu

Applicant(s)

BRUNK ET AL.

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 2/15/2005.
2. ☒ The allowed claim(s) is/are 1-12 and 14-29.
3. ☒ The drawings filed on 25 September 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JOSE L. COUSO
PRIMARY EXAMINER

DETAILED ACTION

Response to Amendment

1. The amendment and written response filed on 2/15/2005 has been entered.
2. Claim 13 has been cancelled.
3. Claims 1, 5-6, 10-12, 14-17, 20-23 and 28-29 have been amended.
4. Claims 1-12 and 14-29 are pending.

Response to Arguments

5. Applicant's arguments, see Remarks, pages 9-12, filed 2/15/2005, with respect to claims 1, 12, 19, 20 and 23 have been fully considered and are persuasive. The rejection of claims 1, 12, 19, 20 and 23 has been withdrawn.

Allowable Subject Matter

6. Claims 1-12 and 14-29 are allowed.

The following is an examiner's statement of reasons for allowance:

- a. Independent claim 1 defines features of providing a first multicolor approximation of the spot color; combining a percentage of the spot color with the multicolor components, which include a digital watermark signal. These features in claim 1 are not taught or suggested by the art of record.
- b. Claims 2-11 are dependent upon Claim 1.
- c. Independent claim 12 defines features of combining the screened spot color with multicolor components, wherein the multicolor components comprise at least cyan, magenta and yellow, and the multicolor components include hidden data. These features in claim 12 are not taught or suggested by the art of record.

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- d. Claims 14-18 are dependent upon claim 12.
 - e. Independent claim 19 defines a printed image including a combination comprising a halftone screening of a spot color ink, and at least cyan, magenta and yellow inks, wherein the cyan, magenta and yellow inks include a digital watermark signal.
 - f. Independent claim 20 defines features of approximating the spot color with cyan, magenta and yellow components; changing the cyan, magenta and yellow components to include a digital watermark; combining the changed cyan, magenta and yellow components with a scaled spot color components. These features in claim 20 are not taught or suggested by the art of record.
 - g. Claims 21-22 are dependent upon Claim 20.
 - h. Claim 23 defines features of screening the spot color area to a percentage of its original intensity; and modulating a set of pixels with the spot color area to comprise a watermark signal, wherein the screened spot color area varies in intensity or luminance, and said modulating adapts modulation of the watermark signal according to localized areas of intensity or luminance resulting in the watermarking signal varying across the spot color area. These features in claim 23 are not taught or suggested by the art of record.
 - i. Claims 24-29 are dependent upon Claim 23.
7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Alattar, "Watermarking Spot Colors", Proceedings of SPIE-IS&T Electronic Imaging, SPIE Vol. 5020, 2003.
- b. Janssen et al, U.S. Patent No. 6,665,095 B1, see figure 7, column 3, lines 28-37 and columns 17-19.
- c. Shaughnessy et al, U.S. Patent No. 5,075,787, see column 6, lines 66-67.
- d. Edwards et al, U.S. Patent No. 6,358,588 B1, see figures 1 and 2, column 5, lines 5-19 and column 8, lines 10-30.

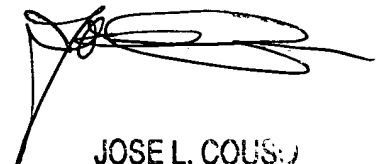
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



JOSE L. COUSIN
PRIMARY EXAMINER